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| 10/604,090 | 06/25/2003 | Theodore V. Valkov | PROS1120 | 1089 |
| 44654 7590 01/03/2008 SPRINKLE IP LAW GROUP 1301 W. 25TH STREET SUITE 408 AUSTIN, TX 78705 | | | EXAMINER ZECHER, MICHAEL R | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/604,090

Applicant(s)

VALKOV ET AL.

Examiner

Michael R. Zecher

Art Unit

3691

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. The following is a final Office Action on the merits. **Claims 1-21** are pending.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. **Claims 1, 10, & 19** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. The term "most closely matches" in **claims 1, 10, & 19** is a relative term which renders the claim indefinite. The term "most closely matches" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 1-8, & 10-21** are rejected under 35 U.S.C. 103(a) as being unpatentable over Phillips et al. (U.S. 7,133,848), and further in view of Yakov (U.S. 2004/0111308).

As per claim 1, Phillips et al. teaches a method of determining a price for a commodity (See figures 1 & 2, and claims 1 & 15, which illustrate and discuss a computer-implemented dynamic pricing system that incorporates a system and method for dynamically pricing a product) comprising:

generating a forecast market state condition for a next period using historical data which includes transactional data (See column 3, lines 3-5, which discuss using historical data from prior transactions to form profit maximizing price recommendations for future sales);

clustering data from a database into clusters based on market conditions or clustering index (See column 3, line 65, through column 4, lines 1, which discuss grouping transactions by market segments; including grouping different market segments into mutually exclusive and collectively exhaustive sets called channel segments);

identifying which cluster most closely matches to the forecast market state condition (See column 4, lines 1-3 discuss aggregating transactions, channel segments, along market segment dimensions); and

generating a price-demand curve using the data from the identified cluster (See figure 2, #140, and which illustrate a price sensitivity model that develops a linear price/volume model).

However, Phillips et al. does not expressly disclose determining a price for a commodity on a spot market that generates a forecast by clustering data, including non-transactional data, and comparing the clustered data to similar market conditions.

Yakov discloses a pricing engine for ascertaining a resource allocation price (See abstract).

Both Phillips et al. and Yakov disclose methods for determining a price for a product. Yakov discloses selling a future contract of a resource or service in a spot market (See paragraphs 219-224, which discusses determining the price of a future contract of a resource or a service in a spot market); whereby non-transactional data, or product-based data, is analyzed (See paragraphs 32, & 36-39, which discusses analyzing products having different time durations and risk cost factors); and basing aggregated data on market conditions (See paragraphs 180 & 350, which discusses investigating relevant parameters, including the current conditional functions).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Phillips to include determining the price of a commodity in a spot market whereby transactional and non-transactional data is clustered to generate a forecast of price based on market conditions as taught by Yakov in order to achieve the predictable result of determining price in a market where goods are sold for cash and delivered immediately.

As per claim 2, Phillips et al. teaches wherein the forecast market state condition comprises at least one of a maximum price for the commodity (See claim 5, which discusses the strategic objective of a maximum price for the product).

As per claim 3, Phillips et al. teaches wherein clustering data comprises:
generating a clustering index to the forecast market state condition (See column 4, lines 36-40, which discusses how the price sensitivity model (PSM) generally models

price sensitivity for a particular product through a function that varies with price to represent the relative change in sales volume); and

assigning the forecast market state condition to the cluster based on its clustering index (See column 3, lines 62-65, which discusses how each transaction has several attributes specifying its different features, and by exploiting the similarities with the attributes, the transactions can be grouped by market segments).

As per claim 4, Phillips et al. teaches wherein generating is performed without using data from any other cluster (See column 4, 9-13, which discusses how each and every sale can be classified into only one channel segment; whereby the channels segments are the level at which product prices will be recommended for computing forecasts).

As per claim 5, Phillips et al. teaches wherein the data from the database comprises transactional data comprising price and quantities sold (See figure 2, #120, which illustrates a transaction database containing the price for the transacted product and the size of sales).

As per claim 6, Phillips et al. teaches determining the price for the next period using the price-demand curve (See figure 2, #130 & #160, which illustrates a Normalized Sales Forecaster and Sales Forecaster capable of forecasting sales over a period of time; and, furthermore, figure 4 which illustrates a linear price/volume model).

As per claim 7, Phillips et al. teaches wherein determining the price comprises determining the price consistent with maximizing profit, volume, or revenue (See figure

2, #15, column 1, lines 12-16, and claim 7, which illustrate and discuss maximizing revenue, profit, and volume).

As per claim 8, Phillips et al. teaches wherein the commodity is a product (See claim 1, which discusses dynamically pricing a product).

Claims 10-18 recite equivalent limitations to claims 1-9, respectively, and are therefore rejected using the same art and rationale as set forth above.

As per claim 19, Phillips et al. teaches a system for determining a price for a commodity (See figures 1 & 2, and claims 1 & 15, which illustrate and discuss a computer-implemented dynamic pricing system that incorporates a system and method for dynamically pricing a product) comprising:

a database comprising historical data for the commodity, wherein the historical data includes transactional data (See figure 2, #120, which illustrates a transaction databases that stores a record of prior transactions);

a market state generation module that is adapted to generate a forecast market state condition for a next period using the historical data (See figure 2, #130 & #160, which illustrate a Normalized Sale Forecaster and Sales Forecaster capable of predicting sales levels in the market segments in the future at different prices for a respective product);

a clustering module that is adapted to generate clusters including a specific cluster that most closely matches the forecast market state condition (See figure 2, #120, which illustrates a transaction database capable of grouping market segments into mutually exclusive and collectively exhaustive sets called channel segments); and

a demand curve generation module that is adapted to generate a price-demand curve in response to receiving data from the specific cluster from the clustering module (See figure 2, #140, which illustrates a price sensitivity model capable of creating a linear model depicting a slope estimating the change in sales per change in price correlated with volume).

However, Phillips et al. does not expressly disclose determining a price for a commodity on a spot market that generates a forecast by clustering data, including non-transactional data, and comparing the clustered data to similar market conditions.

Yakov discloses selling a future contract of a resource or service in a spot market (See paragraphs 219-224, which discusses determining the price of a future contract of a resource or a service in a spot market); whereby non-transactional data, or product-based data, is analyzed (See paragraphs 32, & 36-39, which discusses analyzing products having different time durations and risk cost factors); and basing aggregated data on market conditions (See paragraphs 180 & 350, which discusses investigating relevant parameters, including the current conditional functions). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Phillips to include determining the price of a commodity in a spot market whereby transactional and non-transactional data is clustered to generate a forecast of price based on market conditions as taught by Yakov in order to achieve the predictable result of determining price in a market where goods are sold for cash and delivered immediately.

As per claim 20, Phillips et al. teaches a price determination module that is adapted to use a demand curve from the demand curve generation module (See figure 2, #140, which illustrates a price sensitivity model capable of creating a linear model depicting a slope estimating the change in sales per change in price correlated with volume) and a business rule to determine the price for the commodity for a next period (See column 2, lines 9-11, which discusses how the system optimizes prices given current and projected inventory constraints and different strategic objectives, also known as business rules).

As per claim 21, Phillips et al. teaches wherein:

the forecast market state condition comprises a prediction of the price for the next period (See column 3, lines 3-5, which discuss using historical data from prior transactions to form profit maximizing price recommendations for future sales); and

the specific cluster used by the demand curve generation module comprises the prediction of price (See figure 4, #143, which illustrates the display of graphs of price sensitivity curves using the linear model between maximum and minimum prices).

7. **Claim 9** is rejected under 35 U.S.C. 103(a) as being unpatentable over Phillips et al. (U.S. 7,133,848), and further in view of Official Notice.

As per claim 9, the Phillips et al. and Yakov combination fails to explicitly disclose wherein the commodity is a service.

The Examiner took Official Notice in the previous Office Action that it is old and well known in the art or technology that a commodity may be referred to as a service. Because this Official Notice was not adequately traversed, it is deemed admitted prior

art per MPEP § 2144.03. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Phillips et al. and Yakov combination to include a commodity as a service in order to provide forecasting of prices for services.

Response to Arguments

8. Applicant's arguments, see pg. 6 of the Remarks, filed October 9, 2007, with respect to the rejection of **claim 2** under 35 U.S.C. § 112, second paragraph, have been fully considered and are persuasive. The 35 U.S.C. § 112, second paragraph, rejection of **claim 2** has been withdrawn.

9. Applicant's arguments filed October 9, 2007, have been fully considered but they are not persuasive.

In the Remarks, the applicant argues in substance that:

(a) The method of Phillips will not work in a spot market.

(b) The method of determining a price for a commodity in a spot market includes generating a forecast using historical data, such as transactional data and non-transactional data.

(c) "Clustering data from a database into clusters and identifying which cluster most closely matches the forecast market condition" is different from aggregating and grouping transactions according to market segments.

(d) Phillips does not suggest generating a price-demand curve using data from a specific cluster that most closely matches the forecast market state condition.

(e) When claiming Official Notice, the Examiner is required to submit an affidavit on facts within the Examiner's personal knowledge in order to provide support of these facts.

In response to (a), (b), (c), and (d):

Applicant's amendments necessitated the Examiner's change in the grounds of rejection. See the preceding 35 U.S.C. § 112, second paragraph, rejection of **claims 1, 10, & 19**, and the 35 U.S.C. § 103 rejection of **claims 1-8 & 10-21**.

Regardless, Examiner incorporated the Yakov reference to disclose that determining a price of a commodity in a spot market is obvious to one of ordinary skill in the art (See paragraphs 219-224, which discusses determining the price of a future contract of a resource or a service in a spot market). Yakov specifically discloses taking into account product-based data when generating a forecast (See paragraphs 32, & 36-39, which discusses analyzing products having different time durations and risk cost factors). Furthermore, aggregating and grouping data is synonymous with clustering data (See attached Thesaurus reference), and basing the data on parameters, including market conditions, is also disclosed within Yakov (See paragraphs 180 & 350, which discusses investigating relevant parameters, including the current conditional functions).

It is unclear what Applicant means by "most closely matches," but regardless, Phillips discloses aligning aggregated data with particular market segment dimensions (See column 3, line 57, thorough column 4, line 18, which discusses aggregating transactions, channel segments, along market segment dimensions). Applicant's statement that the market condition based clustering module can be differentiated from

the disclosure in Phillips because it may produce a select number of records that are most relevant is unfounded. Phillips, broadly interpreted, discloses identifying aggregated data which may be group in mutually exclusive and collectively exhausted sets within the market (See column 3, line 57, through column 4, line 18, which discusses aligning data along market segment dimensions that may be both mutually exclusive or collectively exhausted sets within a market).

Based on Applicant's amendments and the reasons set forth above, it would have been obvious to one of ordinary skill in the art to generate a price-demand curve disclosed in Phillips (See figure 2, #140, and which illustrate a price sensitivity model that develops a linear price/volume model) utilizing aggregated data to match the forecast market state in order to determine the price of a commodity in a spot market as disclosed in Yakov (See paragraphs 180, 219-224, & 350, which discusses determining the price of a future contract of a resource or a service in a spot market; and, furthermore, investigating relevant parameters, including the current conditional functions).

In response to (e):

As stated above, Applicant inadequately traversed the Official Notice of **claim 9**. MPEP § 2144.03 does not require the Examiner to submit an affidavit. In determining whether the action should be made final, the Examiner may add a reference to the next Office Action after applicant's rebuttal, whereby the newly added reference is added only as direct corresponding evidence to support the prior common knowledge finding, and does not result in a new issue or constitute new grounds of rejection. A commodity

is defined as something useful (See Webster's II dictionary definition). Examiner points out that Yakov discloses a service provider in the contexts of network services, whereby the service is considered to be useful (See paragraphs 3-8, & 173, which discusses how a pricing engine would be useful in allocating network services).

Conclusion

10. Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael R. Zecher whose telephone number is 571-270-3032. The examiner can normally be reached on M-F 7:30-5:00 alt. Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexander Kalinowski can be reached on 571-272-6771. The fax phone

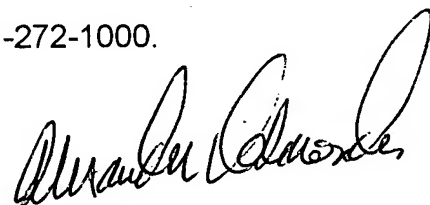
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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MRZ



ALEXANDER KALINOWSKI
SUPERVISORY PATENT EXAMINER